ILLINOIS TRAFFIC STOP STUDY

2014 ANNUAL REPORT

Submitted by Alexander Weiss Consulting, LLC

ALEXANDER WEISS
CONSULTING

Illinois Department of Transportation

0603-15, 02/15
State of Illinois
Illinois Department of Transportation

Table of Contents

Figures and Tables

Illinois Traffic Stop Study 2014 Annual Report

Introduction

This is the eleventh annual report of the Illinois Traffic Stop Study. Alexander Weiss Consulting, LLC prepared this report for the Illinois Department of Transportation (IDOT). This report describes statewide results and related issues. A separate document includes the results from each agency that participated in the study.

This report examines several items:

- Reporting procedures
- Agency participation
- Stop data
- The ratio of stops of minority drivers to the estimated minority driving population
- The reasons for traffic stops
- The duration of traffic stops
- The outcome of traffic stops
- Consent searches
- Dog Sniffs

Illinois Traffic Stop Study Procedures

Since January 2004, police agencies in Illinois have been required to submit data about traffic stops to the Illinois Department of Transportation. This requirement is in place through 2019. [1]

A "traffic stop" occurs when an officer stops a motor vehicle for a violation of the Illinois vehicle code, or for a local traffic violation. The Traffic Stop Study data does not include traffic citations arising from traffic crashes, or in cases in which an officer stops a vehicle that has been linked to a specific crime, such as a vehicle wanted in connection with a robbery. [2]

Our analysis of traffic stops in Illinois is based on the following data elements:

- Race of driver
- Reason for the stop
- Duration of the stop

[1] Public Act 098-0686

[2] If an officer uses a traffic law violation as a pretext to stop a "suspicious" vehicle, that stop should be reported to IDOT.

- Outcome of the stop
- Whether a consent search of the vehicle was requested and conducted
- Whether contraband was found during the consent search.
- Whether a dog sniff was conducted during the stop, and the results of that sniff.

Agencies must submit traffic stop data for the calendar year to IDOT prior to March 1 of the following year. After a preliminary analysis is conducted the results are posted on a secure site at IDOT so that each agency may review its own results. Agencies have approximately ten days to identify possible errors in the report or to submit comments that are attached to agency reports.

Agency Participation

In 2014, 951 law enforcement agencies in Illinois submitted traffic stop data to IDOT. This number is up from 2013 when 943 agencies submitted data. The complete list of non-complying agencies appears in Appendix "B".

Traffic Stops

In 2014, law enforcement agencies in Illinois reported 2,043,247 traffic stops to IDOT. This represents 52,629 fewer stops than 2013. Figure 1 illustrates the number of traffic stops for the period of 2004-2014.

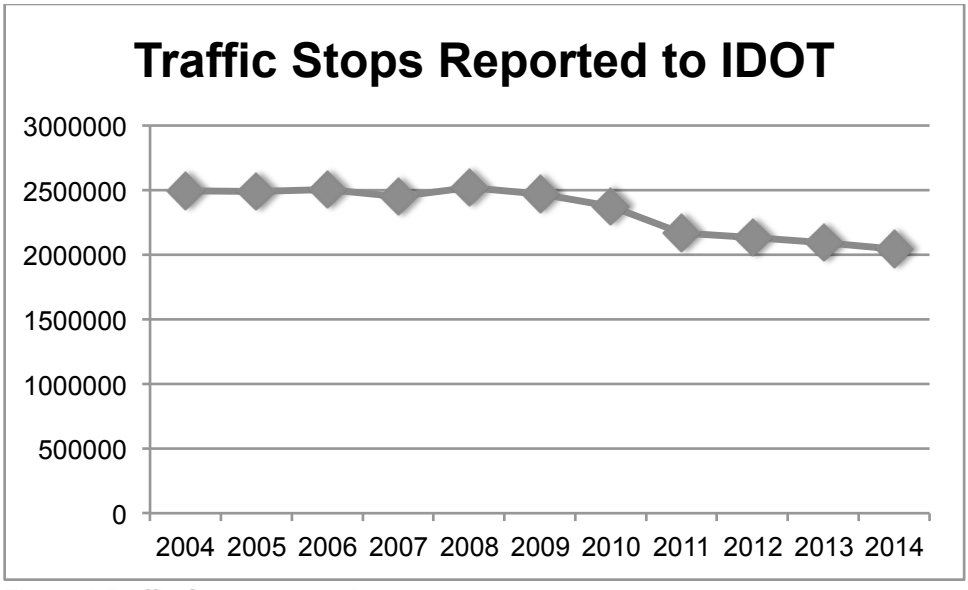

Figure 1 Traffic Stops 2004-2014

In Figure 2 we illustrate the percentage of stops for minority and white drivers.

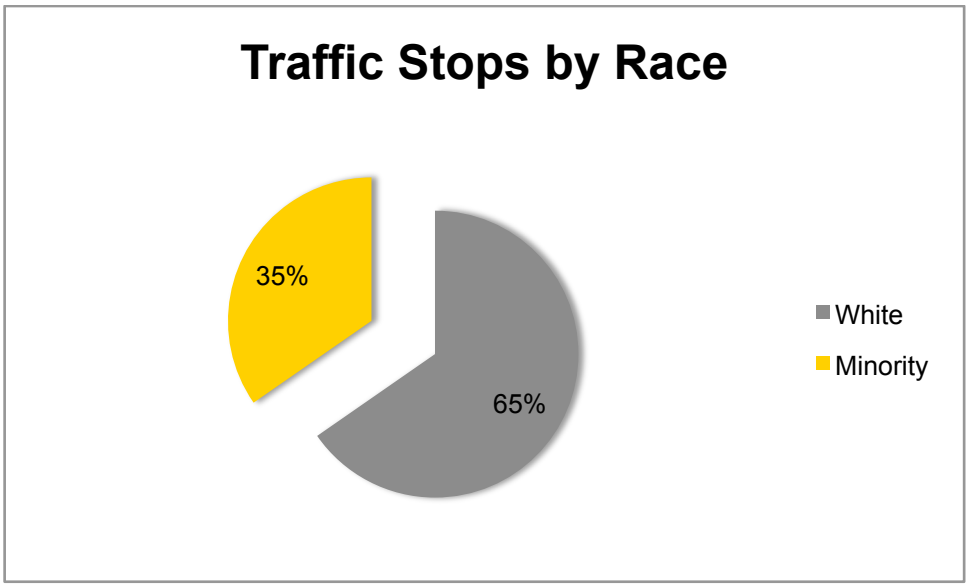

Figure 2 Statewide Traffic Stops by Race 2014

Figure 3 shows traffic stops for each of the six racial categories:

- White (WH)
- African-American (AA)
- American Indian (AI)
- Hispanic (HIS)
- Asian (ASN)
- Native Hawaiian or Pacific Islander (NH)[3]

[3] In Figure 3 a percentage of "0" indicates a percentage of less than one percent.

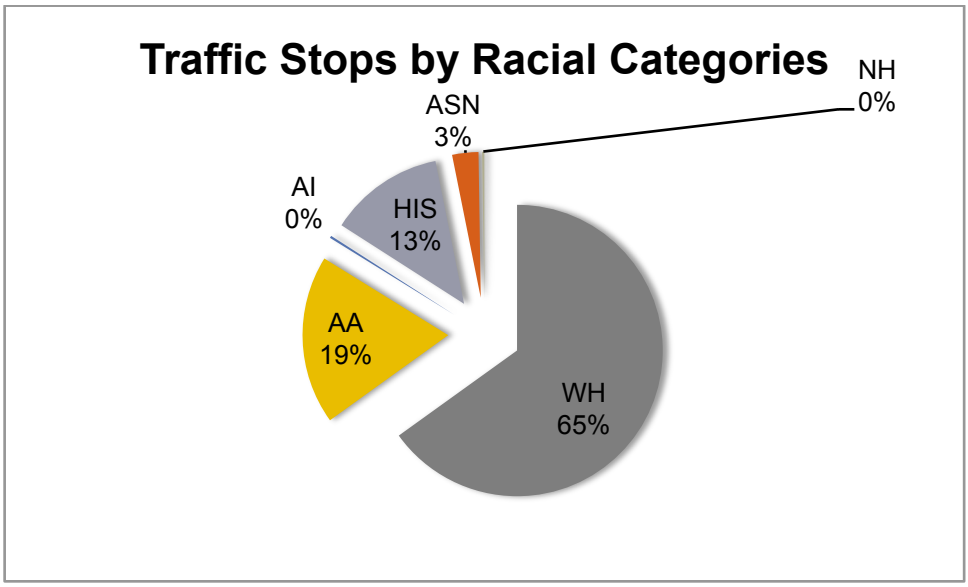

Figure 3 Percentages of Stops by Individual Race

Ratios

Our analysis uses several measures to test the extent to which race plays a part in traffic stops. We have classified these measures as "pre-stop" measures and "post-stop" measures. Pre-stop measures examine behaviors related to the stopping of the vehicle, and post-stop measures illustrate what happens after the vehicle has been stopped and the officer contacts the driver.

The first pre-stop measure is the "ratio". This measure looks at the likelihood that minority drivers will be stopped by a law enforcement agency. To quantify this likelihood we calculate the ratio between the percentage of minority stops of an agency and that community's estimated minority driving population, or as it is often called, the "benchmark". [4]

To illustrate this idea, consider an agency in which 22% of traffic stops involved minority drivers. In this same community the estimated minority driving population was 20%. The ratio for this agency would be 22/20 or 1.1. In other words, in this community, a minority driver is 10% more likely to be stopped than we would expect based on the estimated minority driving population. A ratio of 2, for example, would indicate that a minority driver was twice (100%) as likely to be stopped than we would expect.[5]

[4] For a detailed description of the construction of the estimated driving population see the 2004 Annual Report available from IDOT.
[5] A ratio of zero occurs when an agency makes no stops of minority drivers.

In 2014, the statewide ratio was 1.23 up slightly from 2013 when the ratio was 1.22. Figure 4 illustrates the distribution of ratios across the reporting agencies. As we can see 69% of the law enforcement agencies had ratios below 1.25, while 14% had ratios of 2 or greater.

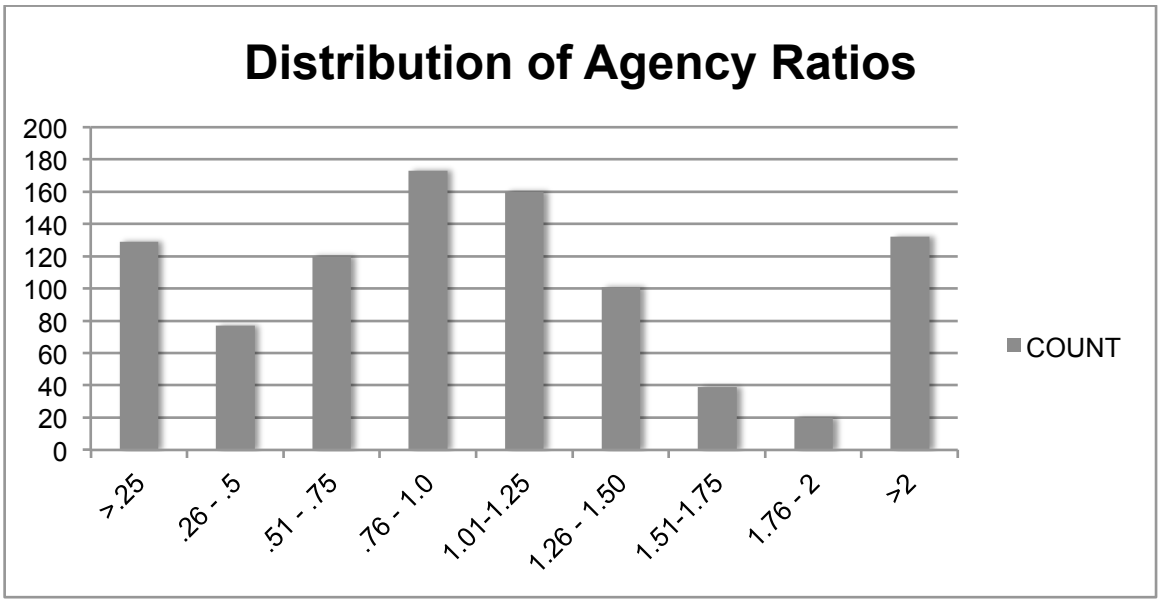

Figure 4 Distributions of Ratios by Agency

Reason for Stop

The second pre-stop measure is the reason for the stop. We are seeking to determine whether race is a determinant factor in the decision to make a traffic stop. To do this we examine the distribution of reasons within race, assuming that if race is not a factor the distribution of reasons within each race will be similar. This is illustrated in Figure 5. In this figure we see the reason for the stop as expressed as a percentage of all the stops for that race.

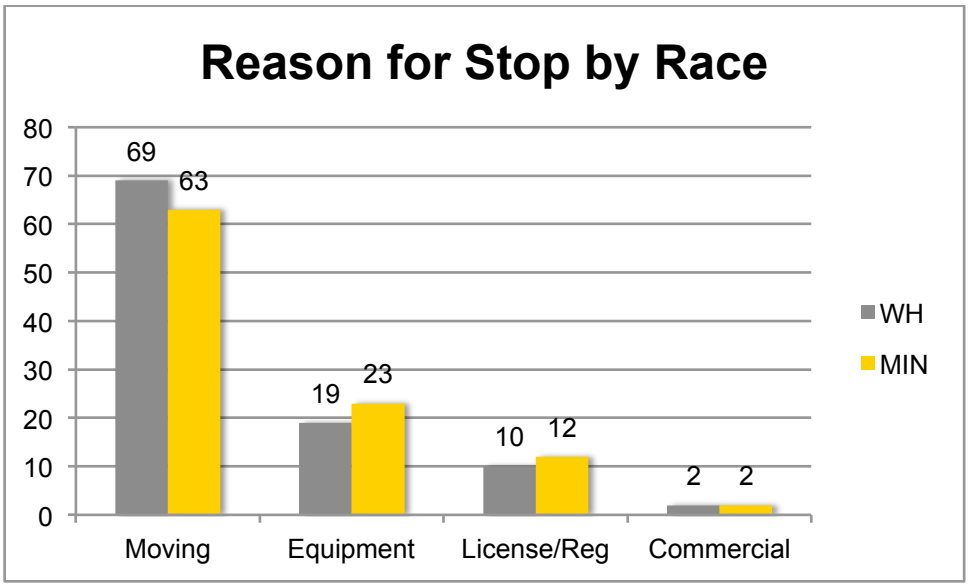

Figure 5 Reasons for Stop by Race

Duration of Stop

Our first post-stop measure is the duration of the stop. Post-stop measures may be more instructive because by this point in the encounter the officer has contacted the driver and drawn a conclusion about the driver's race.

Since January 2007, police officers have been required to include data about the duration of traffic stops. The purpose of adding this data element was to test whether minority drivers are subjected to longer stops than white drivers.

In our analysis we included two measures of average duration, the *mean* and *median*. The mean is calculated by summing the total time for all traffic stops and then dividing by the number of stops. The mean is susceptible to extreme values. That is, an unusually long traffic stop can cause the mean to be larger, and thus it may not be representative of a central or average value. If we take the times for all the stops and place them in order we can derive the median. The median represents the value *in the middle* of the ordered distribution. Another way of explaining this is that half of the values in the distribution are below the median and half are above.[6]

In 2014, the mean duration for stops of white drivers was 11 minutes and for minority drivers it was 12. The median duration for both groups was 10 minutes. These are the same results as 2012 and 2013.

[6] If an agency finds big differences between the mean and median duration times it is important to closely examine the data to determine whether there are real differences by race or anomalies related to data collection .

Figure 6 illustrates the mean and median duration times by race for statewide data. You will note that the mean duration for African Americans and Hispanics is about 18% longer than the mean for the other races.

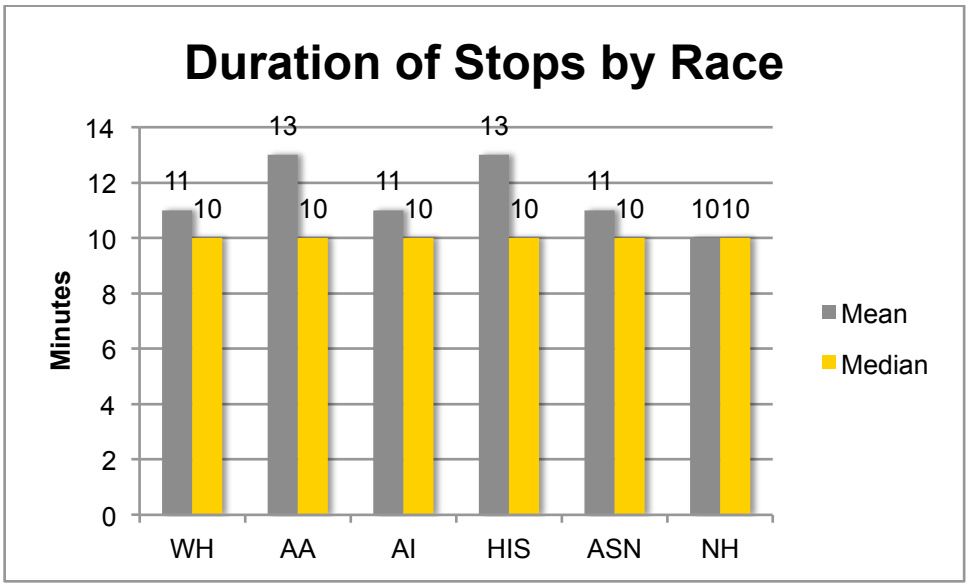

Figure 6 Duration of Stop by Race

Outcome of Stop

The next post-stop measure is the outcome of the stop. We use three categories to define the outcome: citation, written warning, and verbal warning/stop card. [7] Figure 7 compares white drivers and minority drivers on the three possible outcomes. It illustrates the percentage of drivers in the racial category to receive that outcome. For example, 47% of white drivers were cited and 56% of minorities were cited.

[7] Not all agencies issue written warnings.

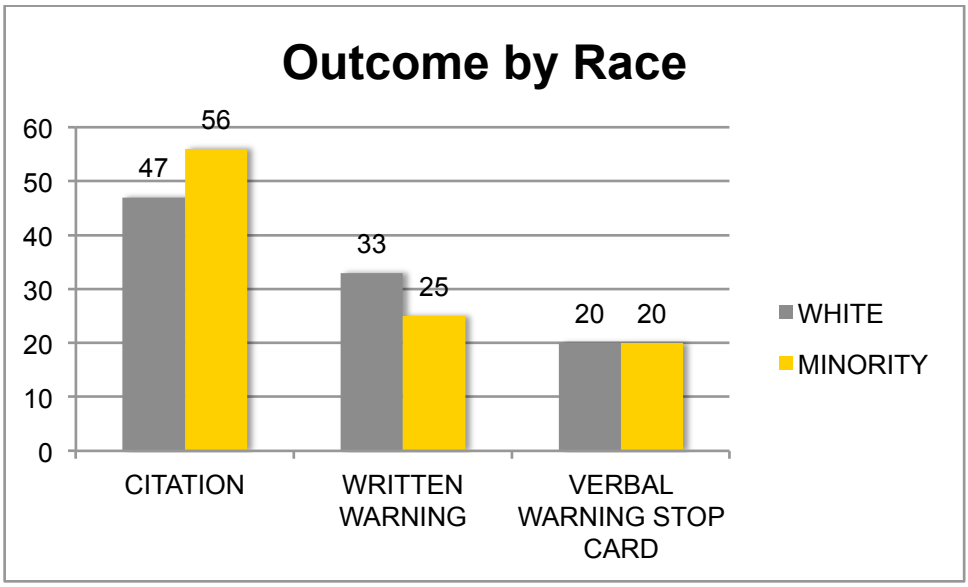

Figure 7 Outcomes of Stops by Race

In 2014, there were 1,022,752 traffic stops in which a citation was issued. A citation was issued in 52% of all stops. Although minority drivers represented about 35% of stopped drivers, they received at least one citation in 35% of all stops.

Figure 8 shows the relationship between race and citation for white and minority drivers. Figure 9 shows the analysis by individual race. As we see a Hispanic driver is 25% more likely to be cited than a white driver.

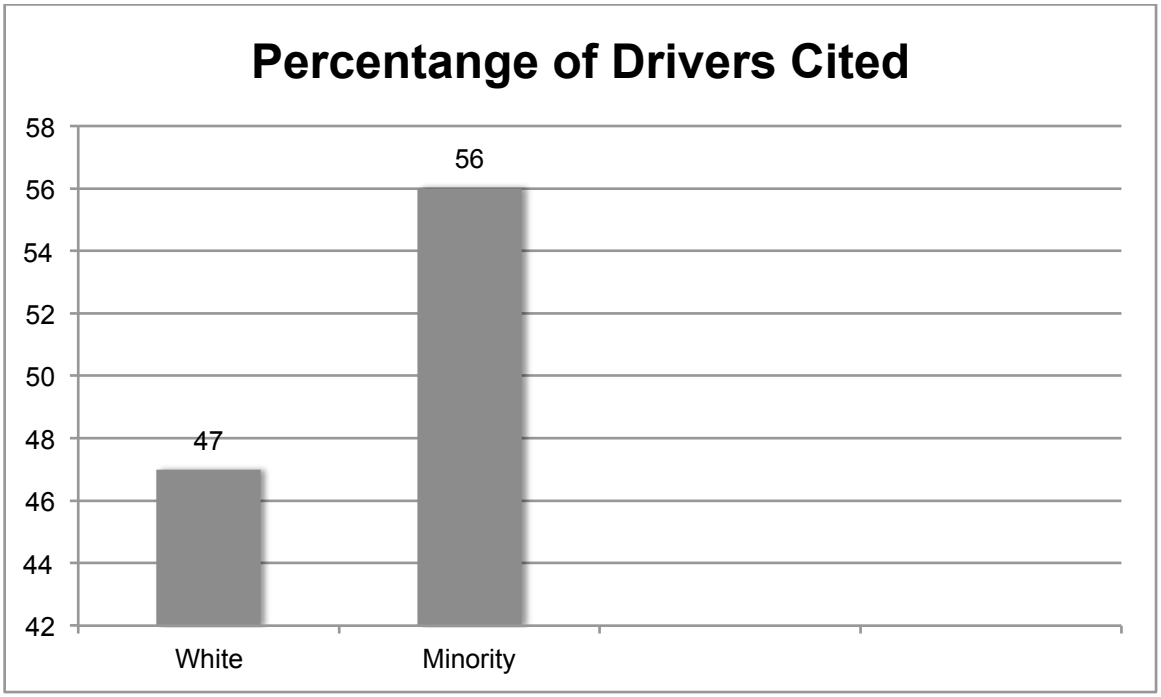

Figure 8 Percentage of Drivers Cited by Race

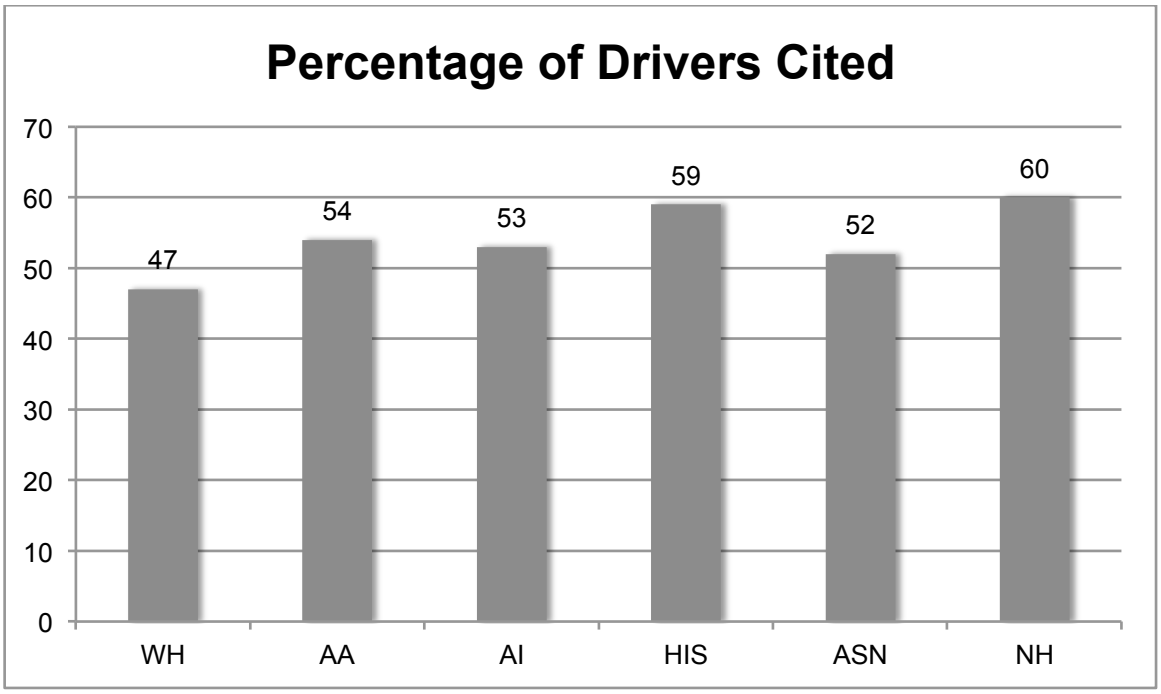

Figure 9 Percentage of Drivers Cited by Individual Race

Consent Searches

The next post-stop analysis examines vehicle consent searches[8]. Consent searches are an important element in the examination of bias in traffic stops. Police officers have many legal justifications for searching motor vehicles without a warrant. Courts have, in general, given police officers wide latitude in conducting such searches, because when the vehicle is" released" any evidence in the vehicle may be unrecoverable. We are particularly interested in consent searches, those in which the decision to request a search is largely that of the individual officer.

In our analysis we treat the consent search as a four step-process:

1. Was a consent search requested?
2. Was permission to conduct the search granted?
3. Was the search conducted?
4. Was contraband found during the consent search?

[8] Data is also collected concerning consent searches of drivers and passengers; however, this analysis only examines consent searches of vehicles.

In 2014, police officers performed 20,722 vehicle consent searches. This equates to a consent search occurring in about one percent of all stops. Figure 10 illustrates the total number of consent searches performed by race and Figure 11 shows the number performed by individual race.

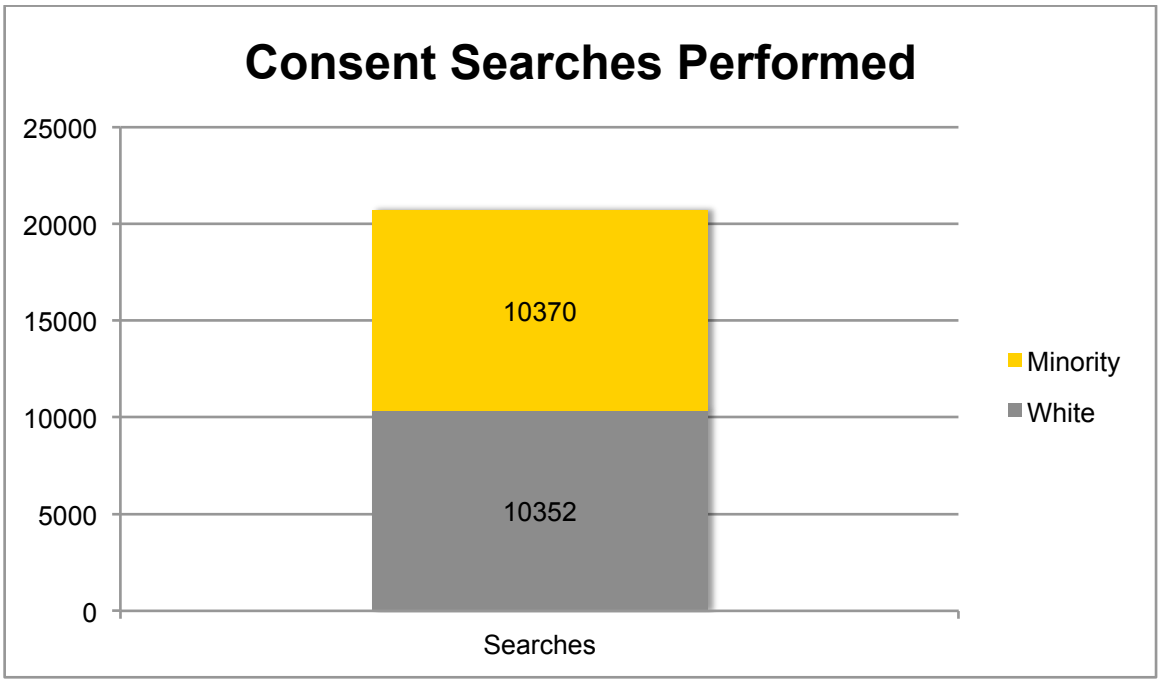

Figure 10 Consent Searches Performed

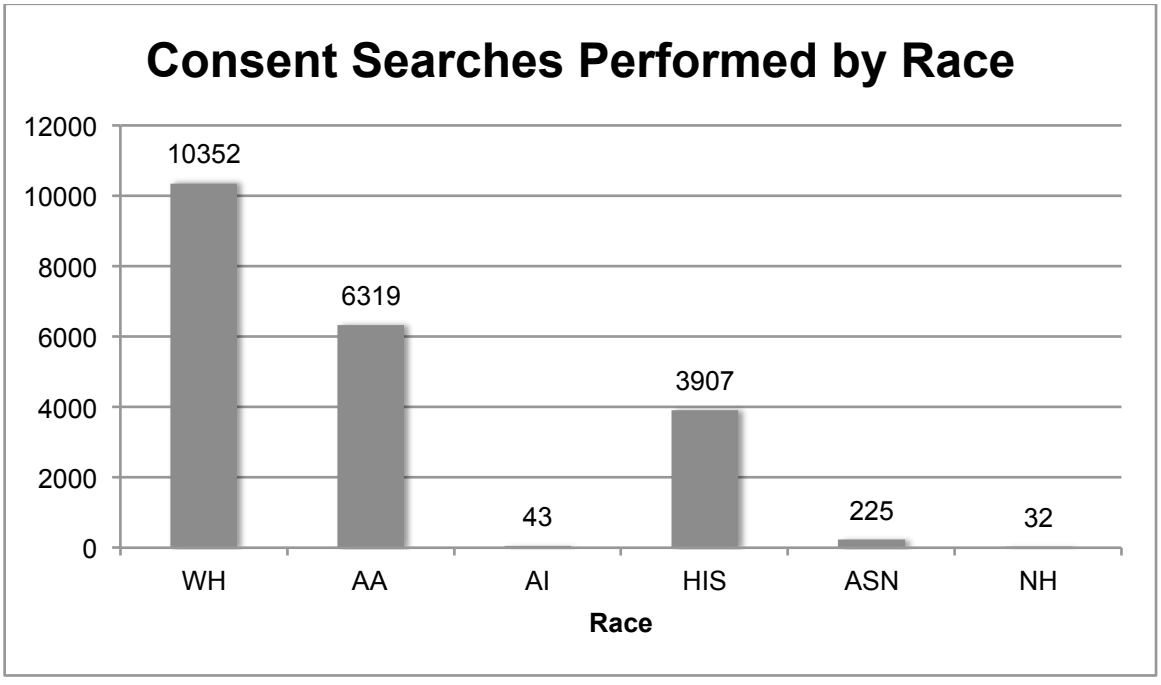

Figure 11 Consent Searches Performed by Individual Race

Most law enforcement agencies perform few, if any vehicle consent searches. In fact, in 2014, only 96 agencies (about ten percent of the participating agencies) performed fifty or more (about one per week) vehicle consent searches. Table 1 illustrates the agencies that conducted more than three hundred vehicle consent searches. Interestingly, these eight agencies account for 33% of all vehicle consent searches conducted in the state.

Agency	Consent Searches Performed
ILLINOIS STATE POLICE	2002
CHICAGO POLICE	1342
SPRINGFIELD POLICE	1092
AURORA POLICE	940
BELLEVILLE POLICE	426
MCHENRY COUNTY SHERIFF	376
LINCOLNWOOD POLICE	331
POSEN POLICE	304

Table 1 Agencies that Conducted More than 300 Vehicle Consent Searches

In Table 2, we examine more closely the consent search data by individual race for 2014. There is important information in these findings. First, we observe how infrequently consent searches are conducted. Second, we observe the decision to permit consent does not vary much by race, whereas in the past there were marked differences. Third, African American and Hispanic drivers are still about twice as likely to be the subject of a vehicle consent search than other drivers, relative to how frequently they are stopped.

	White	African American	American Indian	Hispanic	Asian	NH
Stops	1329576	383030	5101	260995	59476	5066
Requested	12419	7074	49	4406	256	36
Granted (% of Requested)	10702 (86%)	6319 (89%)	45 (92%)	4035 (92%)	232 (91%)	32 (89%)
Performed (% of Stops)	10352 (.8%)	6603 (1.7%)	35 (.7%)	4202 (1.6%)	180 (.3%)	32 (.63%)

Table 2 Consent Search Process by Race

Next, we examine whether a consent search resulted in a seizure of contraband, defined as drugs, drug paraphernalia, weapons, stolen property, alcohol, or "other" contraband. Knowing whether or not contraband is found allows us to calculate the "hit rate," or the likelihood that a consent search results in the seizure of contraband.

In 2014 when the vehicle of a white driver was consent searched, police officers found contraband **27%** of the time. By contrast, when a vehicle driven by a minority driver was consent searched, officers found contraband **18%** of the time. A similar outcome has occurred in each year since we started collecting hit rate data.

In Figure 12, we illustrate the relationship between driver race for the three largest categories and whether contraband was found. For example, white drivers were involved in 50% of all stops in which a consent search was performed, but 63% of the time contraband was found during a stop it was in a vehicle driven by a white driver. By contrast, Hispanic drivers were involved in 19% of consent searches but in only 14% of the cases in which contraband was found.

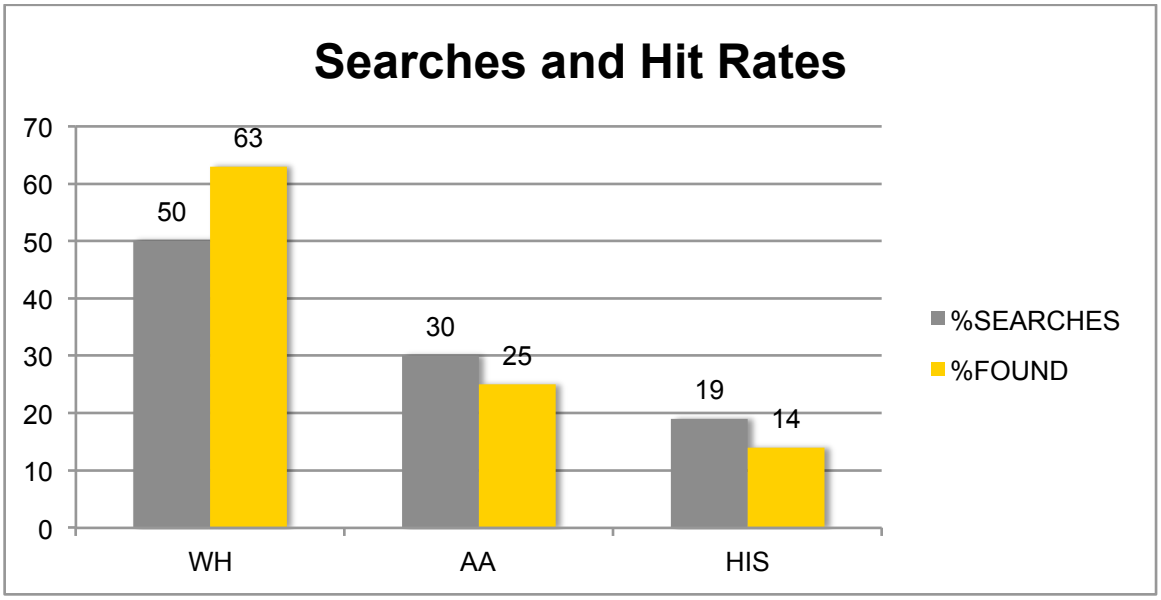

Figure 12 Searches and Hit Rates

A recent study by a professor of public policy at the University of California, Berkeley sheds some light on the use of consent search data.[9] He argues that, "Disparities in consent searches do not represent incontrovertible evidence of profiling. Some officers may request consent even in the presence of probable cause, just to ensure the admissibility of evidence resulting from the search. This could explain some of the disparity, but not all." Professor Glaser, in examining data form the Illinois Traffic Stop Study, argues that, "…it is the outcome of those consent searches that offers the most compelling evidence of racial profiling." He suggests that the disproportional hit rates, "strongly indicate that in order for Whites in Illinois to be consent searched, they need to meet a higher threshold of suspicion."

[9] Glaser, Jack. (2015) Suspect Race: Causes and Consequences of Racial Profiling. New York: Oxford University Press.

Dog Sniffs

This is our third annual examination of dog sniffs during traffic stops. In 2014 agencies reported 6629 dog sniffs. Dog Sniffs were conducted in .2% of stops with white drivers, and .3% of stops in which the driver was a minority. Three hundred and thirty-seven agencies reported having conducted at least one dog sniff. Table 3 lists agencies that conducted 50 or more dog sniffs.

Agency	Dog Sniff Performed
ILLINOIS STATE POLICE	1175
AURORA POLICE	374
STREATOR POLICE	229
BLOOMINGTON POLICE	204
MOUNDS POLICE	179
NORMAL POLICE	173
BELVIDERE POLICE	149
MCHENRY COUNTY SHERIFF	146
PEORIA COUNTY SHERIFF	118
DECATUR POLICE	115
QUINCY POLICE	114
FAIRVIEW HEIGHTS POLICE	102
SPRINGFIELD POLICE	99
CHAMPAIGN COUNTY SHERIFF	95
SCHAUMBURG POLICE	94
UNIVERSITY OF ILLINOIS URBANA POLICE	82
EFFINGHAM POLICE	76
ZION POLICE	73
PEKIN POLICE	71
NAPERVILLE POLICE	67
CHAMPAIGN POLICE	65
BRADLEY POLICE	64
PUTNAM COUNTY SHERIFF	61
URBANA POLICE	58
PEORIA HEIGHTS POLICE	54
ROCKFORD POLICE	54
TRI-COUNTY DRUG ENFORCEMENT NARCOTICS TEAM	54
SAFE (OTTAWA)	53
MORTON POLICE	50

Table 3 Agencies with More Than 50 Dog Sniffs

In addition to the number of sniffs conducted, data is also gathered to identify how often the dog alerts, how often a subsequent search of the vehicle is conducted and whether or not contraband is found. The results are shown in Table 4. It is interesting to observe that the results of searches based on dog sniffs are more productive than those of consent searches, but that dog sniffs of vehicles driven by White drivers yield a higher proportion of contraband.

	White	**Minority**
Total Dog Sniff Searches	3848	2781
Dog Alerts (% of Searches)	2662 (69%)	1896 (68%)
Search Performed (% Alerts)	2618 (98%)	1866 (98%)
Contraband Found (% Performed)	1657 (63%)	1014 (54%)

Table 4 Results of Dog Sniff Searches

In April 2015 the US Supreme Court handed down a ruling that may influence the use of dogs to conduct sniffs during traffic stops. The court ruled that the police may not prolong traffic stops to wait for drug-sniffing dogs to inspect vehicles.

“A police stop exceeding the time needed to handle the matter for which the stop was made violates the Constitution’s shield against unreasonable seizures,” Justice Ruth Bader Ginsburg wrote for the majority. Further, “An officer, in other words, may conduct certain unrelated checks during an otherwise lawful traffic stop,” but “he may not do so in a way that prolongs the stop, absent the reasonable suspicion ordinarily demanded to justify detaining an individual.”[10]

[10] RODRIGUEZ v. UNITED STATES CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE EIGHTH CIRCUIT No. 13–9972. Argued January 21, 2015—Decided April 21, 2015

Appendix A: Interpreting Agency Reports

In this section we illustrate how to interpret an agency report. There are two components to each report. The first provides a comparison by race on several measures. The second part provides the "raw" data that is used to conduct the analysis. We begin with the analysis section. The first part of the report provides summary information on the number of stops of White and Minority drivers, the estimated minority driving population for that community, and the ratio.

The next part of the report provides information about the reason for the stop. The percentages provided describe the distribution *within each race*. For example, we observe that there were 163,995 stops of minority drivers for equipment violations. This represented 23% of all the minority stops.

In the third section we describe the outcome of the stop. You will observe that not all agencies issue written warnings, and thus each stop will be classified as either a citation or a verbal warning/stop card.

Next, we can see information about consent searches. Although we include consent search data for all agencies, readers should take great care in drawing conclusions when an agency has fewer than 50 consent searches per year.

Finally, we can observe data about the use of drug detection dogs.

ILLINOIS TRAFFIC STOP STUDY, 2014	
Agency:	ILLINOIS STATE WIDE

Stops		
	White Drivers	Minority Drivers
Total Stops	1329576	713671
Percentage Stops	65.07%	34.93%
Duration (Mean\Median)	11\10	12\10
Estimated Minority Driving Population		28.48
Ratio		1.23

Reason for Stop				
	White Drivers		Minority Drivers	
Total Stops	1329576		713671	
Moving Violations	912626	69%	451152	63%
Equipment Violations	255485	19%	163995	23%
Licensing / Registration Violations	136935	10%	87641	12%
Commercial Vehicle Violations	27051	2%	13002	2%

Outcome of Stop				
	White Drivers		Minority Drivers	
Total Stops	1329576		713671	
Citation	626070	47%	396682	56%
Written Warning	435065	33%	176102	25%
Verbal Warning/ Stop Card	268441	20%	140884	20%

Vehicle Consent Searches				
	White Drivers		Minority Drivers	
Total Stops	1329576		713671	
Requested	12419	1%	11821	2%
Granted	10702	86%	10663	90%
Performed	10352	97%	10370	97%
Found	2788	27%	1897	18%

Dog Sniff Searches				
	White Drivers		Minority Drivers	
Total Stops	1329576		713671	
Vehicle Dog Sniff Searches	3848	0%	2781	0%
Dog Alerts	2662	69%	1896	68%
Search Performed	2618	98%	1866	98%
Contraband Found	1657	63%	1014	54%

Key Indicators		Total	WH	AA	AI	HIS	ASN	NH	N/S
Stops		2043247	1329576	383030	5101	260995	59476	5066	3
Duration(Mean/Median)		12\10	11\10	13\10	11\10	13\10	11\10	10\10	10\7
Reason For Stop	Moving	1363778	912626	234580	3689	164913	44165	3805	0
	Equipment	419480	255485	90125	914	61915	10262	779	0
	License	224576	136935	53971	440	28334	4487	409	0
	Commercial Vehicle	48858	27051	11951	112	8805	806	133	0
	N/S	3	0	0	0	0	0	0	3
Outcome of Stop	Citation	1022752	626070	207137	2681	152723	31123	3018	0
	Written Warning	611167	435065	96722	1320	60406	16662	992	0
	Verbal Warning/SC	409325	268441	79171	1100	47866	11691	1056	0
	NS	3	0	0	0	0	0	0	3
Vehicle Consent Searches	Requested	24240	12419	7074	49	4406	256	36	0
	Granted	21365	10702	6319	45	4035	232	32	0
	Performed	20722	10352	6163	43	3907	225	32	0
	Found	4685	2788	1165	4	674	41	13	0
Dog Sniff Searches	Sniffs	6629	3848	1964	9	746	58	4	0
	Alerts	4558	2662	1417	5	432	40	2	0
	Alert Search	4484	2618	1395	5	425	39	2	0
	Found	2671	1657	781	3	205	24	1	0

Appendix B: Non-complying Agencies

APPLE RIVER POLICE
ASHTON POLICE
ASSUMPTION POLICE
BATH POLICE
BELGIUM POLICE
BRADFORD POLICE
BRIDGEPORT POLICE
BROOKLYN POLICE
BUCKNER POLICE
BUDA POLICE
BUFFALO-MECHANICSBURG POLICE
BUNCOMBE POLICE
BUREAU POLICE
CAMBRIA POLICE
CHRISTOPHER POLICE
DALLAS CITY POLICE
DONGOLA POLICE
ELKVILLE POLICE
EWING POLICE
FREEMAN SPUR POLICE
GOREVILLE POLICE
GREAT LAKES NAVAL STATION
GREENVIEW POLICE
HUME POLICE
INDIANOLA POLICE
JOY POLICE
JUNCTION CITY POLICE
KILBOURNE POLICE
LUDLOW POLICE
MANSFIELD POLICE
MOUND CITY POLICE
NORWOOD POLICE
OGLE COUNTY SHERIFF
PITTSBURG POLICE
POCAHONTAS POLICE
RIDGWAY POLICE
SHEFFIELD POLICE
SHIPMAN POLICE
SIDELL POLICE
SPAULDING POLICE
ST. ELMO POLICE
ST. FRANCISVILLE POLICE
TAYLOR SPRINGS POLICE
THEBES POLICE
TISKILWA POLICE
TOLUCA POLICE
VALIER POLICE
VILLA GROVE POLICE
WASHBURN POLICE
WESTFIELD POLICE
WILSONVILLE POLICE
WINCHESTER POLICE
YATES CITY POLICE
ZEIGLER POLICE